

SARS-CoV-2 (2019-nCoV) Spike Neutralizing Antibody, Rabbit MAb



Sino Biological
Biological Solution Specialist

Catalog Number: 40592-R0004

GENERAL INFORMATION	
Immunogen:	Recombinant SARS-CoV-2 (2019-nCoV) Spike RBD-mFc Protein (Catalog#40592-V05H)
Preparation	This product is a recombinant monoclonal antibody expressed from HEK293 cells.
Ig Type:	Rabbit IgG
Clone ID:	004
Concentration	> 1 mg/mL
Purity	> 90 % as determined by SDS-PAGE. > 90 % as determined by SEC-HPLC.
Endotoxin	< 3 EU/mg
Neutralization	The neutralization activity is measured by microneutralization assay in vitro. The virus microneutralization (MN) test was performed on 293T-ACE2 cells infected with SARS-CoV-2 Spike Pseudovirus (WT, Cat# PSV001), or SARS-CoV-2 Spike Omicron (B.1.1.529) Pseudovirus (Cat# PSV016), or SARS-CoV-2 Delta (B.1.617.2) variant Spike Pseudovirus (Cat# PSV011), under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of Anti-SARS-CoV-2 Neutralizing Antibody (Catalog# 40592-R0004). Rate of inhibition was determined by comparing the Relative Light Unit (RLU) of Luciferase reporter in different antibody concentrations. IC ₅₀ (WT) is 0.12-2.95 µg/mL. IC ₅₀ (Omicron) is 3.05-59.4 µg/mL. IC ₅₀ (Delta) is 0.5-6.5 µg/mL.
Formulation:	0.2 µm filtered solution in PBS
Storage:	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.
APPLICATIONS	
Applications:	ELISA,FCM,IHC-P,ICC/IF,Neutralization
	(Antibody's applications have not been validated with corresponding viruses. Optimal concentrations/dilutions should be determined by the end user.)
RECOMMENDED CONCENTRATION	
ELISA	ELISA: 0.1-0.2 µg/mL
FCM	FCM: 10-40 µg/ml
IHC-P	IHC-P: 10-50 µg/ml
ICC/F	IF: 10-50 µg/ml

Please Note: Optimal concentrations/dilutions should be determined by the end user.

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	2019-nCoV Coronavirus spike
	Has cross-reactivity in ELISA with SARS-CoV-2 Omicron (KP.2) Spike S1+S2 trimer Protein (Cat# 40589-V08H61) SARS-CoV-2 Omicron (XBB.1.16) Spike S1+S2 trimer Protein (Cat# 40589-V08H48) SARS-CoV-2 Omicron (XBB.1.5) Spike RBD Protein (Cat# 40592-V08H146) SARS-CoV-2 Omicron (XBB.1.5) Spike S1+S2 trimer Protein (Cat# 40589-V08H45) SARS-CoV-2 Omicron (XBB.1) Spike S1+S2 trimer Protein (Cat# 40589-V08H42) SARS-CoV-2 Omicron (XBB) Spike RBD Protein (Cat# 40592-V08H144) SARS-CoV-2 Omicron (BQ.1.1) Spike S1+S2 trimer Protein (Cat# 40589-V08H41) SARS-CoV-2 Omicron (BQ.1.1) Spike RBD Protein (Cat# 40592-V08H143) SARS-CoV-2 Omicron (BF.7) Spike S1+S2 trimer Protein (Cat# 40589-V08H39) SARS-CoV-2 Omicron (BA.4.6/BF.7) Spike RBD Protein (Cat# 40592-V08H140) SARS-CoV-2 Omicron (BA.4.6) Spike S1+S2 trimer Protein (Cat# 40589-V08H37) SARS-CoV-2 Omicron (BA.2.75) Spike RBD Protein (Cat# 40592-V08H135) SARS-CoV-2 Omicron (BA.2.75) Spike S1+S2 trimer Protein (Cat# 40589-V08H36) SARS-CoV-2 Omicron (BA.2.75.2) Spike RBD Protein (Cat# 40592-V08H141) SARS-CoV-2 Omicron (BA.2.75.2) Spike S1+S2 trimer Protein (Cat# 40589-V08H38) SARS-CoV-2 Omicron (BA.2.3.20) Spike RBD Protein (Cat# 40592-V08H142) SARS-CoV-2 Omicron (BA.1.1) Spike S1+S2 trimer Protein (Cat# 40589-V08H29) SARS-CoV-2 Omicron (BA.1.1) Spike RBD Protein (Cat# 40592-V08H129) SARS-CoV-2 Omicron (B.1.1.529) S1+S2 trimer Protein (Cat# 40589-V08H26) SARS-CoV-2 Omicron (B.1.1.529) Spike S1 Protein (Cat# 40591-V08H41) SARS-CoV-2 Omicron (B.1.1.529) Spike RBD Protein (Cat# 40592-V08H121) SARS-CoV-2 Omicron (BA.2) Spike S1+S2 trimer Protein (Cat# 40589-V08H28) SARS-CoV-2 Omicron (BA.2.12.1) Spike RBD Protein (Cat# 40592-V08H132) SARS-CoV-2 XD (BA.1 x AY.4) Spike S1+S2 trimer Protein (Cat# 40589-V08H30) SARS-CoV-2 Delta (B.1.617.2) Spike S1+S2 trimer Protein (Cat# 40589-V08H10) SARS-CoV-2 Delta (B.1.617.2) Spike S1+S2 Protein (Cat# 40589-V08B16) SARS-CoV-2 Delta (B.1.617.2) Spike S1 Protein (Cat# 40591-V08H23) SARS-CoV-2 Delta (B.1.617.2) Spike RBD Protein (Cat# 40592-V08H90) SARS-CoV-2 Spike RBD (K417T, E484K, N501Y) Protein (Cat# 40592-V08H86) SARS-CoV-2 Spike RBD (K417N, E484K, N501Y) Protein (Cat# 40592-V08H85) SARS-CoV-2 Spike RBD (N501Y) Protein (Cat# 40592-V08H82) SARS-CoV-2 Spike S1 Protein (Catalog#40591-V08B1) SARS-CoV-2 Spike RBD Protein (Catalog#40592-V08B) HCoV-HKU1 (isolate N1) Spike S1 Protein (Cat# 40021-V08H)
	Medium cross-reactivity in ELISA with SARS-CoV-2 Omicron (BA.2) Spike S1 Protein (Cat# 40591-V08H43) SARS-CoV-2 Omicron (BA.2) Spike RBD Protein (Cat# 40592-V08H123)
	Minimal cross-reactivity in ELISA with SARS-CoV-2 Omicron (BA.4) Spike RBD Protein (Cat# 40592-V08H130)
	No cross-reactivity in ELISA with SARS-CoV-2 Omicron (BA.2) Spike S1 NTD Protein (Cat# 40591-V08H44) SARS-CoV-2 Omicron (BA.5) Spike RBD Protein (Cat# 40592-V08H131) SARS-CoV-2 Delta (B.1.617.2) Spike S1 NTD Protein (Cat# 40591-V08H36) SARS-CoV Spike S1 Protein (Cat# 40150-V08B1) MERS-CoV Spike S1 Protein (Cat# 40069-V08B1) HCoV-HKU1 (isolate N5) Spike S1 Protein (Cat# 40602-V08H) HCoV-NL63 Spike S1 Protein (Cat# 40600-V08H) HCoV-229E Spike S1 Protein (Cat# 40601-V08H) HCoV-OC43 Spike S1+S2 ECD Protein (Cat# 40607-V08B)
Specificity (ELISA)	

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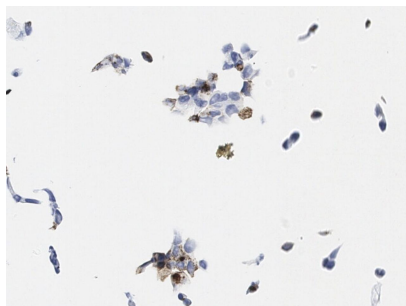
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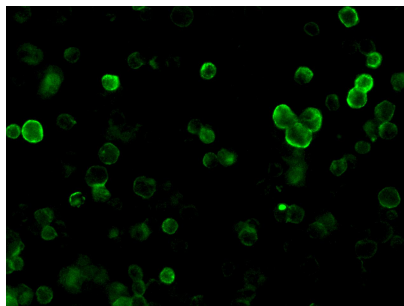
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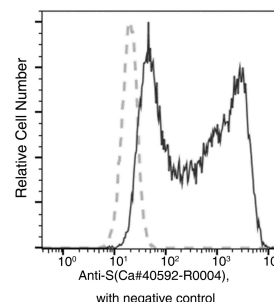
Immunohistochemical analysis of SARS-CoV-2 Spike overexpressed HEK293 Cells were stained with purified anti-SARS-CoV-2 Spike Rabbit Mab, then a HRP-conjugated second step antibody.

(Validation Experiment)



Immunofluorescence analysis of SARS-CoV-2 Spike overexpressed HEK293 Cells were stained with purified anti-SARS-CoV-2 Spike Rabbit Mab, then a Alexa Fluor®488-conjugated second step antibody.

(Validation Experiment)

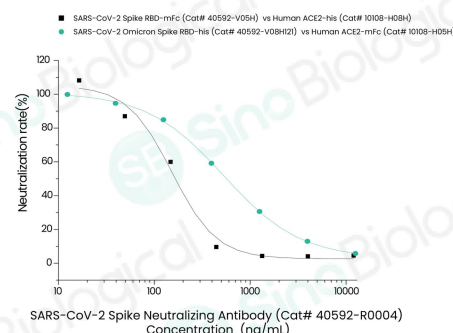


Flow cytometric analysis of SARS-CoV-2 Spike overexpressed HEK293 cells. Cells were stained with purified anti-SARS-CoV-2 Spike Neutralizing Rabbit Mab, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

(Validation Experiment)

WT		Omicron		Delta	
Conc. (µg/mL)	Inhibition%	Conc. (µg/mL)	Inhibition%	Conc. (µg/mL)	Inhibition%
100	99.46%	100	96.48%	100	100.00%
20	99.38%	20	63.50%	20	100.00%
4	99.43%	4	25.55%	4	99.70%
0.8	92.12%	0.8	32.61%	0.8	27.99%
0.16	36.98%	0.16	16.24%	0.16	25.63%
0.032	41.77%				
0.0064	37.85%				
0.00128	26.33%				

The neutralization activity is measured by microneutralization assay in vitro. The virus microneutralization (MN) test was performed on 293T-ACE2 cells infected with SARS-CoV-2 Spike Pseudovirus (WT, Cat# PSV001), or SARS-CoV-2 Spike Omicron (B.1.1.529) Pseudovirus (Cat# PSV016), or SARS-CoV-2 Delta (B.1.617.2) variant Spike Pseudovirus (Cat# PSV011), under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of Anti-SARS-CoV-2 Neutralizing Antibody (Catalog# 40592-R0004). Rate of inhibition was determined by comparing the Relative Light Unit (RLU) of Luciferase reporter in different antibody concentrations. IC₅₀(WT) is 0.12-2.95 µg/mL. IC₅₀(Omicron) is 3.05-59.4 µg/mL. IC₅₀(Delta) is 0.5-6.5 µg/mL.



Serial dilutions of SARS-CoV-2 Spike Neutralizing Antibody (Cat# 40592-R0004) could block the bind between Human ACE2 Protein and SARS-CoV-2 Spike RBD Protein. IC₅₀ (WT) is 100-400 ng/mL. IC₅₀ (Omicron) is 200-800 ng/mL.

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